ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Schneider Electric / AEG / Modicon TSX CTY 4A* at our website: *Click HERE*

Modicon Premium automation platform
TSX CTY 2A/4A counter modules

Presentation

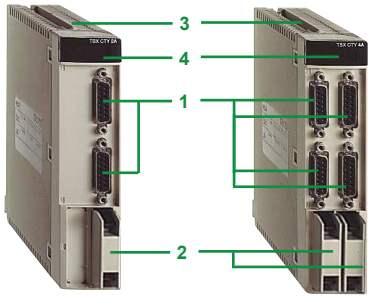
Counting functions are required for counting parts or events, grouping objects, incoming or outgoing flow control, and measuring the lengths or positions of items.

Premium PLCs perform these functions using **TSX CTY 2A/4A** counter modules which have a counting frequency of 40 kHz maximum. In a Premium PLC configuration, the number of TSX CTY counter modules must be added to that of the other application-specific modules (communication, motion control and weighing). (See pages 43517/8 and 43511/5). They are hot-swappable. Counter modules are characterized by their number of channels:

■ 2 channels with downcounting, upcounting and up/down counting for the **TSX CTY 2A** module

■ 4 channels with downcounting, upcounting and up/down counting for the **TSX CTY 4A** module

The parameters of these functions are set by software configuration. The modules take 5 V ⎓ or 10 to 30 V ⎓ sensors with solid state outputs (incremental encoders, proximity sensors, photoelectric detectors) and with mechanical contact outputs (in this case the counting frequency is limited to 100 Hz).



TSX CTY 2A *TSX CTY 4A*



Description

The front panel of **TSX CTY 2A** (2-channel) and **TSX CTY 4A** (4-channel) counter modules comprises:

1 One 15-way SUB-D connector per channel for connecting:
- □ Counter sensors or incremental encoder
- □ Sensor power supply
- □ Encoder power supply feedback for checking that it is supplied correctly

2 One 20-way HE10 connector for 2 channels for connecting the following for each channel:
- □ Auxiliary inputs: preset, enable
- □ Reflex outputs
- □ Power supplies for auxiliary I/O and incremental encoders

3 Rigid casing, which:
- □ Holds the electronic card
- □ Locates and locks the module in its slot

4 Module diagnostic LEDs:
- □ Module diagnostics:
  - Green RUN LED: module operating
  - Red ERR LED: internal fault, module failure
  - Red I/O LED: external fault
- □ Channel diagnostics: Green CH● LED: channel diagnostics available

Operation:
page 43540/3

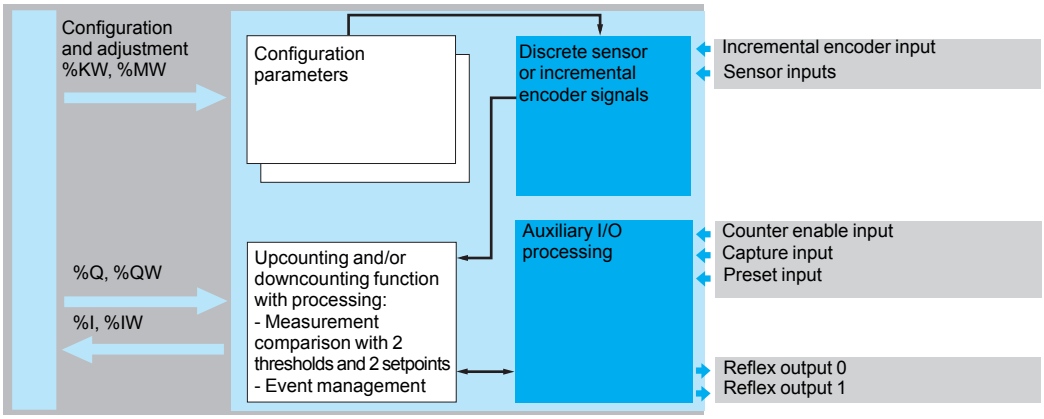
References:
pages 43540/4 ...

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Modicon Premium automation platform
TSX CTY 2A/4A counter modules

Operation block diagram

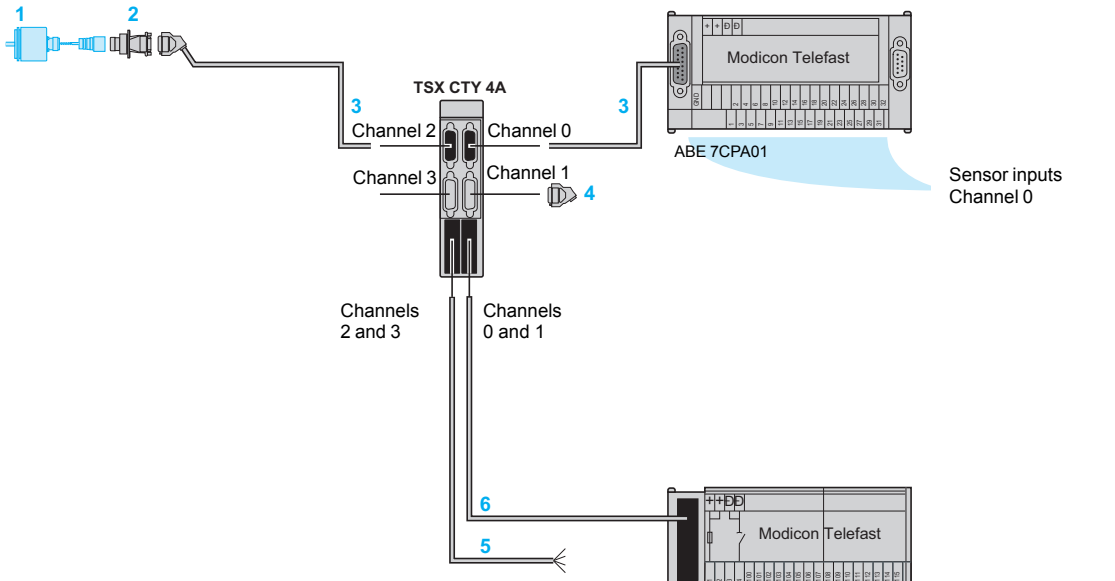
Block diagram of a channel



Counter modules are set up using Unity Pro or PL7 Junior/Pro software.

Architectures

Example of an architecture with counter inputs



1 Incremental encoder
2 **TSX TAP S15 05/24** connector
3 **TSX CCP S15** cable with connectors
4 **TSX CAP S15** connector
5 **TSX CDP ●●1** preformed cable with connectors
6 **TSX CDP ●●2** or **TSX CDP ●●3** rolled ribbon cable or cable with connectors

Presentation: page 43540/2
References: pages 43540/4 ...

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Modicon Premium automation platform
TSX CTY 2A/4A counter modules


TSX CTY 2A


TSX CTY 4A

References

Counter modules

Type of input	Characteristics	No. of channels	Reference	Weight kg
24 V ⎓ 2/3 wire PNP/NPN sensors, 5 V ⎓ RS 422 or 10…30 V ⎓ Totem Pole incremental encoders	40 kHz counting Cycle time 5 ms	2	**TSX CTY 2A**	0.320
	40 kHz counting Cycle time 10 ms	4	**TSX CTY 4A**	0.430


ABE 7CPA01


ABE 7H16R20


TSX TAP S15 ●●

Connection accessories

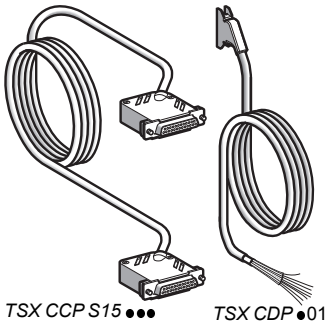
Description	For connecting	Connector type on TSX CTY ●●	No. *(1)*	Unit reference	Weight kg
SUB-D connectors Sold in lots of 2	Counter sensors or incremental encoder	15-way SUB-D	4	**TSX CAP S15**	0.050
Modicon Telefast ABE 7 connection sub-bases	Counter sensors and 24 V ⎓ power supply	15-way SUB-D	–	**ABE 7CPA01**	0.300
	Auxiliary inputs, 24 V ⎓ power supply and 5 V/10…30 V ⎓ encoder power supply	20-way HE 10 (for 2 channels)	–	**ABE 7H16R20**	0.300
Additional terminal block Order in multiples of 5	20 linked terminals for ABE 7H16R20 sub-base		–	**ABE 7BV20**	0.030
Connection interfaces for incremental encoder	5 V ⎓ RS 422 encoder	15-way SUB-D	2	**TSX TAP S15 05**	0.260
	10…30 V ⎓ Totem Pole encoder	15-way SUB-D	2	**TSX TAP S15 24**	0.260

(1) For numbers, see page 43540/3.

Presentation: page 43540/2
Operation: page 43540/3

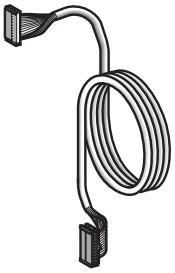
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Modicon Premium automation platform
TSX CTY 2A/4A counter modules



TSX CCP S15 ●●●

TSX CDP ●01



TSX CDP ●02



TSX CDP ●03

References (continued)

Connecting cables

Description	From TSX CTY ●● module	To	No. (1)	Length	Reference	Weight kg
Cordsets AWG 12 (0.205 mm²)	15-way SUB-D connector	ABE 7CPA01/CPA11 sub-bases or TSX TAP S15● accessory (15-way SUB-D connector)	3	0.5 m	**TSX CCP S15 050**	0.110
				1 m	**TSX CCP S15 100**	0.160
				2.5 m	**TSX CCP S15**	0.300
20-wire preformed cable AWG 22 (0.324 mm²) 500 mA max.	24 V ⎓ power supply and 5 V/10…30 V ⎓ encoder power supply auxiliary inputs (moulded 20-way HE 10 connector)	Free end with colour-coded wires	5	3 m	**TSX CDP 301**	0.400
				5 m	**TSX CDP 501**	0.660
				10 m	**TSX CDP 1001**	1.210
Rolled ribbon cable AWG 28 (0.08 mm²) 100 mA max.	24 V ⎓ power supply and 5 V/10…30 V ⎓ encoder power supply auxiliary inputs (20-way HE 10 connector)	ABE 7H16R20 sub-base (20-way HE 10 connector)	6	1 m	**TSX CDP 102**	0.090
				2 m	**TSX CDP 202**	0.170
				3 m	**TSX CDP 302**	0.250
Connecting cables AWG 22 (0.324 mm²) 500 mA max.	24 V ⎓ power supply and 5 V/10…30 V ⎓ encoder power supply auxiliary inputs (moulded 20-way HE 10 connector)	ABE 7H16R20 sub-base (20-way HE 10 connector)	6	0.5 m	**TSX CDP 053**	0.085
				1 m	**TSX CDP 103**	0.150
				2 m	**TSX CDP 203**	0.280
				3 m	**TSX CDP 303**	0.410
				5 m	**TSX CDP 503**	0.670
				10 m	**TSX CDP 1003**	1.180

(1) For numbers, see page 43540/3.

Presentation: page 43540/2
Operation: page 43540/3

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP